

# COMPUTER TECH STATE EXAM REVIEW – Page 1 of 5

## COMPUTER BASICS

**Computer** – A device that accepts input, processes data, stores data, and produces output

**Processing** – To carry out operations on data or programs (happens in the CPU)

**Memory** – Area of the computer that **temporarily** holds data waiting to be processed, stored, or output

**Storage** – Area of the computer that holds data on a **permanent** basis

**Computer program** – Instructions that tell a computer what to do

**Binary or Base 2 Numbering System** – A method for representing letters or numbers using only two digits, 0 and 1  
– most basic level of communicating with computers

**Bit** – Each 0 or 1

**Byte** – 8 bits

**Kilobyte (KB)** – 1,000 bytes

**Megabyte (MB)** – 1 million bytes

**Gigabyte (GB)** – 1 billion bytes

**Terabyte (TB)** – 1 trillion bytes

## HARDWARE

**Hardware** – Physical parts of the computer (mouse, keyboard, printer, CPU)

**Microprocessor or CPU (Central Processing Unit)** – Brains of the computer, processing happens here

**Hertz** - measures speed of computer components

**Megahertz (MHz)** - 1 million cycles per second

**Gigahertz (GHz)** – 1 billion cycles per second

**ROM** – Read Only Memory – a chip on the motherboard that holds specific instructions for the computer's operation  
– permanent, cannot be changed

**RAM** – Random Access Memory – A computer's **temporary** memory

**Hard Disk** – A rigid, magnetic storage device kept inside the computer to hold programs and data

**Modem** – Connects the computer to a phone line

**Peripheral Devices** – Devices connected by cable to the computer (keyboard, printer, camera, etc.)

**Input Device** – Any device used to input data into the computer

Examples: keyboard, mouse, scanner, microphone

**Output Device** – Any device used to receive output from the computer

Examples: monitor, printer, speakers, projector

**Pixel** – The basic unit of an image

**Resolution** – Amount of pixels on the screen – the more pixels, the better the resolution

**Storage Device** – A device used to record and store data when the computer is turned off (all disks and drives are storage devices)

**CD/DVD** – A storage device that uses optical laser technology to record data

**Hard disk** – A rigid, magnetic storage device kept inside your computer

**Flash drive** – A small, portable device used for storing data. Usually plugs into a USB port.

**External hard drive** – A hard drive that is stored outside of the computer in its own case.

## SOFTWARE / OPERATING SYSTEM

**Software** – Computer programs (instructions for the computer)

**Operating System software** – Controls the overall functions of the computer – helps hardware and application programs work together

Examples: Windows, Apple OS

**Application software** – A program that performs a **specific** function

Examples: word processing, spreadsheet, presentations, a game, a photo program

**Multitasking** – The ability of the operating system to run more than one program at a time, switching between application programs

## COMPUTER TECH STATE EXAM REVIEW – Page 2 of 5

**Icon** – An image that represents a file, folder, or program

**File** – One document or one picture

**Folders** – A way to organize files into logical and manageable groups

**Filenames** – In Windows, filenames are given an extension which tells the type of file - .doc (Word), .pdf (Adobe Reader), .jpg (image)

**Save** – After the first save, clicking SAVE will automatically replace the old file with the new one

**Save As** – Always opens the save window allowing you to control where you save and what the name will be

**Selecting Files and Folders** –

**Select All** – Ctrl + A OR click and drag around all files

**Select Section** – Shift + Click will select from the first click to the last click

**Random Selection** – Ctrl + Click will select items not next to each other

### NETWORKS / INTERNET / ELECTRONIC COMMUNICATIONS AND COLLABORATION

**Network** – Computers and devices connected together to communicate or share devices

**LAN** – Local Area Network – Computers and devices connected within a confined space such as an office

**WAN** – Wide Area Network – Multiple computers connected over larger geographical areas

**File Server or Server** – A computer that processes requests from clients across a network

**Client** – Hardware or software that sends requests to a server

**Network Speed** – Measured in bits per second (bps)

**Firewall** – Software or hardware that helps screen out hackers and viruses

**Wireless Communication** - Uses radio waves to allow devices to exchange data or connect to the internet over short distances.

**IP Address** – A unique, numerical address assigned to each computer or device on a network – used to locate devices across a network

**Email** – Electronic mail

**Attachment** – An electronic file or photo sent with an email message

**Internet** – A global network of networks

**World Wide Web (www)** – A collection of web pages you can access through the internet – the www is only **part of** the internet

**Website** – A connected group of web pages

**Web page** – One page on a website

**Link or hyperlink** – A word, phrase, or picture that links or connects you to another website or webpage

**URL** – Uniform Resource Locator – The address of a website, web page or file on the web –

*Example:* www.disney.com

**Search Engine** – A program that searches the web for websites or pages that match keywords –

*Examples:* Firefox, Internet Explorer, Google Chrome

**Boolean Operators** – **AND (+)**, **OR**, **NOT (-)** - help narrow down a search

**Browser** – Application program that allows you to view information on the web and move from location to location

*Examples:* Internet Explorer, Firefox

**ISP (Internet Service Provider)** – A company that provides a connection to the internet for a fee

**Common Domain Name Extensions**

**.com** = company, **.edu** = education, **.org** = organization, **.gov** = government, **.mil** = military

**Validity** – Evaluating a website to determine if the information is valid by looking at author, credentials, date last updated, type of site (.edu, .gov, etc.)

### VIRUSES

**Virus** – a kind of malicious software written intentionally to enter a computer without the user's permission or knowledge, with the ability to copy itself and continue to spread

**Malware** – Malicious software

**Adware** – Automatically displays advertisements

## COMPUTER TECH STATE EXAM REVIEW – Page 3 of 5

**Spyware** – Software that enables the user to gain information from your computer without your knowledge

**Time Bomb** – Watches for a certain date or time to activate a virus

**Logic Bomb** – Waits for a specific set of input to activate the virus

**File Virus** – Attaches to an application program or operating system file

**Boot Sector Virus** – Infects system files your computer needs to start up

**Trojan Horse** – A computer program that seems to perform one function while actually doing something else

**Worm** – Virus that spreads from computer to computer, usually through a network

**Antivirus Software** – Software that attempts to recognize and destroy viruses before they infect your computer

### DIGITAL CITIZENSHIP

**Ethics** – Principles of right and wrong that guide behavior

**Digital Citizenship** – Using technology in a safe, legal, and responsible way.

**Spam** – Sending unsolicited electronic bulk messages or junk mail

**Cyber-bullying** – Using electronic communication to harm or harass in a deliberate, repeated, and hostile manner

**Copyright** – The rights possessed by the owner of information or resources

**Creative Commons** – Flexible range of protections - Lets you dictate how others may use your work

**Trademark** – Protecting a name, symbol, or logo so that others cannot use it without your permission.

**Piracy** – Making illegal copies of CDs, DVDs, movies, music, software, etc.

**Plagiarism** – Copying someone else's work and claiming it as your own or not giving proper credit to the owner

**Software License** – A legal contract that defines the ways in which you may use a computer program

**Regular software license** – Usually allows you to load software on ONE computer, All Rights Reserved

**Freeware** – Free software – You can use, copy, share but not sell or change

**Shareware** – Trial software – Use the software for a trial period and then decide whether to purchase it

**Public Domain** – Available for anyone to use for free

**EULA (End User License Agreement)** – A legally binding contract you agree to when you install software

**AUP (Acceptable Use Policy)** – Guidelines on how a network can and should be used

### PRESENTATIONS / POWERPOINT

**Presentation** – An electronic slide show

**Microsoft PowerPoint** – Application program used to create an electronic slide show or presentation

**Design** – Style and color of slides (choose a Design Theme for consistency)

**Background** – The background of one slide may be changed by right clicking on it

**Layout** – Placement of text and objects on the slides

**Transition** – How a slide will enter the screen (can also set automatic timing here)

**Animation** – Adding movement or an effect to text or objects – controls the order of things entering a slide

**Thumbnail** – A small, visual representation of a slide or picture

**View** – Normal (active slide is large, other slides are thumbnails) slide sorter (shows only thumbnails), outline (shows an outline of the show), notes

### WORD PROCESSING

**Word processing** – An application program to help create documents such as memos, letters, and reports

**Microsoft Word** – Application program used for word processing

**Default settings** – The settings that are in place when a program is opened such as margins or font


**Line spacing** – The number of blank lines between typed lines (single, double, triple, etc.)

**Alignment** – How text is aligned (lined up) between the left and right margins (**left, right, center**)

**Vertical alignment** – How text is aligned between the top and bottom margins (**page center**)

**Orientation** – Determines whether your document will be printed lengthwise or crosswise

**Portrait** – lengthwise (vertical - the usual default setting) 

**Landscape** – crosswise (horizontal) 

**Cut** – CTRL + X – Cut a selection and place it on the clipboard

## COMPUTER TECH STATE EXAM REVIEW – Page 4 of 5

**Copy** – CTRL + C – Copy a selection and place it on the clipboard

**Paste** – CTRL + V – Paste a selection from the clipboard

**Clipboard** – A **temporary** storage area for a selection that is waiting to be pasted

**Tab Stops** – Setting places on the ruler line where the tab key will stop

**TAB** – Press TAB to move from one tab stop to the next

**Leaders** – Dots, dashes, or lines that fill in the space from tab stop to tab stop

**Indent** – Lining up a section of text **IN** from the left or right margin

*First line indent, left indent, right indent, hanging indent*

**Header or Footer** – Information that appears on the top or bottom of every page

**Template** – a document that someone creates as a pattern – it includes all formatting, you just have to add info

### SPREADSHEETS

**Spreadsheet / Workbook** – A grid of rows and columns containing numbers, text, formulas, and calculations

**Microsoft Excel** – Application program used to create spreadsheets

**Row** – Horizontal cells up and down a spreadsheet – represented by numbers (1, 2, 3)

**Column** – Vertical cells across a spreadsheet – represented by letters (A, B, C)

**Cell** – Where a row and column intersect (A1, C3, D10)

**Active Cell** – The cell your cursor is in

**Sheet** – One page in a workbook

**Range** – A section of the spreadsheet identified by beginning cell and ending cell (C1:G10)

**AutoFit** – Adjusts the size of rows or columns to fit the data within those rows or columns

**Auto Fill** – Click and drag the AutoFill button to automatically fill from one cell to several others

**Number Format** – Changing the look of numbers – Currency (\$), Percent (%), Date format, etc.

**Mathematical operators (+ - \* /)** – Used to create formulas and calculations

**Formula** – Use cell addresses and mathematical operators to create a formula – start with =

**Functions** – A special formula Excel has created for you

**SUM** – Adds numbers in a range

**AVERAGE** – Averages numbers in a range

**MAX** – Finds the highest (max) number in a range

**MIN** – Finds the lowest (minimum) number in a range

**COUNT** – Counts the number of cells in a range that contain a number

**Sort** – Changing the order of information

**Ascending** – from A to Z, 0 to 1, or low to high

**Descending** – from Z to A, 9 to 1, or high to low

**Chart or Graph** – A visual representation of data

Pie Chart – Shows part as it relates to the whole

Line Chart – Shows changes over time

Bar/Column Chart- Compares series

**X-axis** – Usually the horizontal axis, usually left to right – usually shows the topics of the values

**Y-axis** – Usually the vertical axis, usually top to bottom – usually shows the range of values

**Legend** – Key for interpreting the chart's colors, patterns, etc.

### DATABASES

**Database** – A collection of records

**Field** – One piece of data, the same as a cell in a table – fields are designated by column headings

**Record** – The same as a row in a table, all of the information about a single item in a table

**Query** – A question – requesting information from the database - searching

**Table** – A way to display records (rows) and fields (columns)

**Forms** – A simple way to enter information

## COMPUTER TECH STATE EXAM REVIEW – Page 5 of 5

**Reports** – Display your final information